



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,466	02/25/2002	Tetsuya Okumura	57090 (70904)	4306
21874	7590	04/21/2008		EXAMINER
EDWARDS ANGELL PALMER & DODGE LLP				PSITOS, ARISTOTELIS M
P.O. BOX 55874			ART UNIT	PAPER NUMBER
BOSTON, MA 02205			2627	
			MAIL DATE	DELIVERY MODE
			04/21/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/082,466	OKUMURA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Aristotelis M. Psitos	2627	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 12 December 2007.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

#### **DETAILED ACTION**

- In response to applicant's request filed on 12/12/07 the previous Final Office action of 9/12/07 is hereby VACATED, and the following action is taken.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1,7,13 and 2,8,14 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

As presented in claim 1, the meets and bounds of the elements in this claim is not clear when the dependent claims 7 and 13 introduce their limitations.

In particular, independent claim 1 calls for a predetermined length mark measurement means which measures the reproduction characteristics of the short and long reproducing power control marks, which further includes a pattern detection element which when detected measures the reproducing characteristic(s) to only the short power control marks, and a power control means.

As described on page 17 of the specification – as it describes figures 1 and 5, the power control elements is interpreted as element 212 in the acknowledged prior art figure 5, which corresponds to element 12 in figure 1; the pattern detection element is element 6 (which has no equivalent in the acknowledged prior art figure 5), and the length mark signal measuring element is interpreted as elements 8 and 9 in figure 5, which corresponds to elements 221 and 222 in figure 5 (the acknowledged prior art).

However, claim 7 attempts to further limit parent claim 1 by introducing a reproduction control element, which as noted in page 17 of the disclosure, is elements 11 and 12. Since element 12 is already presented as the power control element, the meets and bounds of the parent claim are no longer clearly understood.

Art Unit: 2627

Finally, claim 13 then further limits claims 7/1 by introducing a division circuit which is arranged to measure a ratio between the amplitude values of the short and long reproducing power control marks.

This is defined as element 10 in figure 1, and the equivalent element 210 in figure 5, the acknowledged prior art. However, because the long mark measuring element is not responsive to the pattern detection means of the parent claim 1, the meets and bounds of the parent claim are no longer clear.

Wrt claims 2, 8 and 14; the meets and bounds of claims 2 and 8 are not clear for the reasons as stated above wrt claims 1 and 7, i.e., the power control element of claim 2 is element 12; while the reproducing condition control means is elements 11 and 12. Claim 14 further depends upon claim 8 and fails to further clarify the above problem.

As far as the claims are interpreted and understood, the following art rejections are made.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1,2,5,7,9,11,13,15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art considered with Tanaka et al and both further considered with Okumura et al (6288992)...

Claim 1

Acknowledged prior art figure 5

An optical reproducing device comprising:

see disclosure of this figure on  
page 17 of the present specification

predetermined length mark signal measurement means  
for measuring reproduction signal characteristics respectively  
of a short reproducing power control mark  
and of a long reproducing power control mark  
from information data that are recorded in a data recording area  
of a sector of an optical recording medium;

see below analysis  
as it refers to elements 221 & 222  
with respect to elements 8 & 9  
see Okumura et al

Art Unit: 2627

and

power control means for controlling reproducing power  
of a light beam based on the measured reproduction  
signal characteristics of the short and long reproducing  
power control marks,

elements 211 & 212

wherein the predetermined length mark signal measurement means  
further includes a pattern detection means  
for detecting a specific pattern including  
therein an arrangement of a plurality of short reproducing  
power control marks from amongst a bit arrangement pattern  
of the information data in the data recording area,  
and when the specific pattern is detected,  
to measure the reproduction signal characteristic  
of short reproducing power control marks, the measured  
reproduction signal characteristic of short reproducing power  
control marks corresponding only to the plurality of  
short reproducing power control marks included  
in the specific pattern.

see analysis of Tanaka et al

In the above analysis, the examiner has compared and contrasted the elements in figures 1 and 5,  
and concludes the following elements are equivalent:

Figure 5 (acknowledged prior art)

figure 1

Element 221 & 222

element 8 and 9

Element 210

element 10

Element 211

element 11

Element 212

element 12

Hence, the limitation with respect to:

"...from information data that are recorded in a data recording area of a sector or an optical  
recording medium ..."; and

"...to measure the reproduction signal characteristic of short reproducing power control marks,  
the measured reproduction signal characteristic of short reproducing power control marks corresponding  
only to the plurality of short reproducing power control marks included in the specific pattern." Are not  
clearly found in the primary reference.

The Okumura et al reference, (6288992) when describing the operation of figures 9 & 10

Art Unit: 2627

(acknowledge prior art in this document) starting at col. 11 line 16 and continuing till col. 14 line 41, the ability of placing/having the long and short reproducing power control marks in a data recording area of a sector of an optical recording medium is well known.

Furthermore, as noted in Tanaka et al, starting at col 9 line 30, measuring the reproduced signal such that the measured reproduction signal characteristic of a short reproducing power control marks ("2T") correspond only to the plurality of short reproducing power control marks (see figure 9 which depicts therein a plurality of the mark lengths a plurality of short ("2T" marks) is taught as computed on the basis of the time of the shortest recording mark. This is performed so that thermal shift (% of thermal shift of the reproduced signal (pattern) can be measured and jitter therein can be properly evaluated and subsequently used to determine the overall recording power margin – as further discussed in col. 9 starting at line 49.

It would have been obvious to modify the base system of the acknowledged prior art with The above teachings from both Tanaka et al and Okumura, motivation is to have the appropriate Control marks (short/long) in each sector of the record medium as well as to evaluate and compensate for thermal shift in the recording power margin. Although the margin is referred to the recording power, such a thermal shifts have impact upon the reproducing modes/capabilities of a laser as well. One of ordinary skill in the art would avail themselves of correction systems in an optical reproducer.

With respect to claims 3 and 5, i.e., the  $mT\ 2T\ 2T\ nT$  pattern - ( $m,n = \text{positive integers}$ ), and that  $M= n = 2$ , as noted in page 20 of the present specification, such is also present in the prior art pattern. Alternatively, see Tanaka et al, which depicts a mark pattern of  $2T\ 2T\ 2T\ 2T$ .

Hence this limitation is considered met with the above combined teachings.

With respect to claims 7, 9 and 11, the examiner interprets such an element as further taught by The acknowledged prior art with respect to elements 211 & 212. No further analysis is presently advanced.

With respect to claims 13, 15 and 17, the division element is interpreted as element 210 in the Acknowledged prior art, while the target value is introduced through the (-) input of amplifier 211.

Art Unit: 2627

3. Claims 19/1, 19/3, 19/5, 20/13,20/15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1,3,5,13, and 15 above, and further in view of Okumura et al (6404717),

With respect to the ability of having the measuring element predicated upon an average value of the measured signals, such is taught/provided for by Okumura et al - see for instance the discussion as recited in col. 13, lines 6-13.

It would have been obvious to modify the base systems as relied upon above with this additional ability, motivation is as discussed in the abstract of the document.

***Allowable Subject Matter***

4. Claims 2,4,6,8,10,12,14,16,18, 19/2,19/4, 19/6, 20/14, 20/16 would be allowed if the above 112 problems with respect to claims 2,8 and 14 were corrected. None of the cited prior art teaches the additional capability of the comparison means (elements 6 & 7) further included in the predetermined mark length measuring means (elements 8 & 9) as define in the specification on page 18 thereof.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thru: 6:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aristotelis M Psitos  
Primary Examiner  
Art Unit 2627

/Aristotelis M Psitos/  
Primary Examiner, Art Unit 2627  
5.